

Innovative western blotting from start to finish

Introducing the four-component iWestern Workflow Bundle.

Streamline your western blotting with the Invitrogen™ iWestern™ Workflow, an inventive take on the decades-long problem of getting the desired results from the often elusive and time-consuming western blot. Every instrument in the iWestern Workflow is meticulously developed to produce exceptional western blot results with minimal hands-on time. At the core of the iWestern Workflow are four innovative western blotting instruments designed with a focus on processing efficiency, reproducibility, and performance (Figure 1).

Separate proteins

The Invitrogen™ Mini Gel Tank is an intelligently engineered protein electrophoresis tank with a side-by-side design that provides a forward-facing well configuration for easier sample loading and simultaneous visualization of both gels during electrophoresis. Because it has two individual buffer tanks, less running buffer is required when running only a single gel. Compatible with over 180 gels of different formats and gel chemistries, the Mini Gel Tank provides the flexibility to choose the best gel for the experiment at hand.

We provide the Mini Gel Tank in each of our Protein Gel Welcome Packs (Figure 2). Protein Gel Welcome Packs include two boxes of gels (with your choice of gel chemistry) and the necessary buffers to perform electrophoresis. The standard iWestern Workflow Bundle includes the Invitrogen™ Bolt™ Gel Welcome Pack, featuring Bis-Tris gel chemistry for optimal western blotting performance. You can also customize your iWestern Workflow Bundle



Figure 1. iWestern Workflow instrument components. From left to right, the Invitrogen™ Mini Gel Tank, the Invitrogen™ iBind™ Western Device, the Invitrogen™ iBlot™ 2 Gel Transfer Device, and the Invitrogen™ iBright™ FL 1000 Imaging System.

Table 1. Precast gels available with four gel chemistry options to fit your protein separation needs.

Gel chemistry	Application
Bis-Tris	Broad-range, low-abundance protein separation; downstream applications requiring high protein integrity (e.g., posttranslational modification analysis, mass spectrometry, or sequencing)
Tris-glycine	Broad-range, high-abundance protein separation
Tris-acetate	High molecular weight protein separation (up to 500 kDa)
Tricine	Low molecular weight protein separation (as low as 2 kDa)

by choosing an alternative Protein Gel Welcome Pack with gel chemistry that is compatible with your target protein's abundance and size, and the downstream application (Table 1).

Transfer proteins

The Invitrogen™ iBlot™ 2 Gel Transfer Device is our premium western blot transfer device, delivering high performance and convenience. The iBlot 2 Gel Transfer Device is a unique, innovative dry blotting system that utilizes preassembled transfer stacks with transfer buffer incorporated into gel matrices, so there is no need to prepare messy transfer buffers, and minimal posttransfer cleanup is required. The short distance between electrodes, along with high field strength and current, reduces transfer time to only 7 minutes—just insert your gel and go. The standard iWestern Workflow Bundle includes the iBlot 2 Starter Kit (Figure 3), with transfer stacks to get you started.

Detect proteins

The Invitrogen™ iBind™ Western Devices are simple, nonpowered instruments that automate many of the tedious, routine western blot processing steps and improve blot-to-blot consistency. The original iBind Western Device accommodates the processing of one mini blot at a time, whereas the iBind Flex Western Device accommodates the processing of up to one midi blot, two mini blots, or six vertically cut strip blots. Both systems are compatible with chromogenic, chemiluminescence, and fluorescence detection protocols.

Simply load primary antibody, secondary antibody, and wash solutions, then walk away. Sequential lateral flow technology takes over, eliminating the need for trays, timers, or shakers. The entire immunoblotting process is complete in less than 3 hours and uses up to 80% less primary antibody than traditional methods. The standard iWestern Workflow Bundle comes with the iBind Starter Kit (Figure 4), which includes the consumables needed to get started, but it can be customized to include the iBind Flex Starter Kit if increased throughput is needed.

Image and analyze proteins

The Invitrogen™ iBright™ Imaging Systems (Figure 5) are high-performance, all-in-one instruments for capturing images and analyzing data from western blots and gels. Complete with a powerful 9.1 megapixel camera (Figure 6), proprietary Smart Exposure™ acquisition technology, Thermo Fisher Cloud connectivity, an easy-to-use interface, and a suite of automated features, iBright Imaging Systems make western blot imaging fast and easy for researchers at all experience levels.

Two iBright instruments are available—the iBright CL1000 system, for imaging and documenting chemiluminescent western blots and stained protein and nucleic acid gels, and the iBright FL1000 system (Figure 5), which features the same imaging modes as the iBright CL1000 system but also offers 5-channel fluorescent blot imaging capability in both visible and near-IR excitation and emission channels. The standard iWestern Workflow Bundle includes the iBright FL1000 Imaging System.

Modernize your western blot protocol with the iWestern Workflow

Learn more about the iWestern Workflow Bundle, explore the many options for customization, and request a quote at thermofisher.com/iwesternbp77. ■

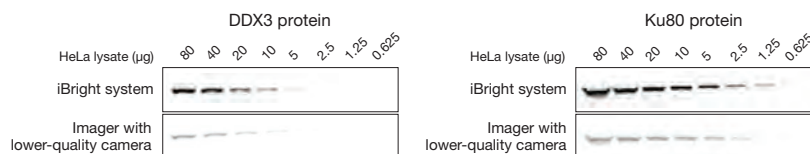


Figure 6. iBright Imaging Systems feature a powerful 9.1 megapixel camera for sensitive signal detection. Two-fold serial dilutions of HeLa cell lysate (starting at 80 µg/lane) were loaded and run on Invitrogen™ Novex™ Tris-glycine gels, transferred, and probed with antibodies against DDX3 or Ku80 protein. Blots were then probed with corresponding HRP-conjugated secondary antibodies, developed with Thermo Scientific™ SuperSignal™ West Pico PLUS Chemiluminescent Substrate (Cat. No. 34577), and visualized (using 10 sec exposures) on either the Invitrogen™ iBright™ FL1000 Imaging System or another imaging device with a lower-quality, 4.1 megapixel camera.



Figure 2. Protein Gel Welcome Pack with Mini Gel Tank.



Figure 3. Invitrogen™ iBlot™ 2 Starter Kit.



Figure 4. Invitrogen™ iBind™ Starter Kit.



Figure 5. Invitrogen™ iBright™ FL1000 Imaging System.